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SEVEN NEW SPECIES OF THE SYRPHID GENUS  
SPHEGINA MEIGEN (DIPTERA).

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There are at the present time seven species of this genus recorded from the United States. In this paper there are included descriptions of seven new species the types of all of which are deposited in the United States National Museum.

*Sphegina flavomaculata*, sp. n.

*Male*.—Shining black, with faint grayish pruinescence. Antennae brownish yellow. Thorax indistinctly trivittate, the median vitta divided anteriorly. Abdomen with a large elongate yellow mark in center of first (second) tergite, and the second and third tergites yellow except posteriorly. Legs colored as in *armatipes*.

Arista thickened on basal two thirds, very little longer than antenna, with very short pubescence. First tergite broad, narrowed basally, not longer than the next two combined. Fifth sternite with very short pale hairs which are almost uniformly distributed on the entire surface; hypopygium with short hairs. Hind femur not as thick as first tergite; spur of hind tibia curved, acute; basal segment of hind tarsus shorter and stouter than in next species.

Length, 5 mm.

*Type*.—Great Falls, Va., April 20, 1916 (W. L. McAtee).

*Sphegina armatipes*, sp. n.

*Male*.—Black, shining, with faint gray pruinescence. Facial prominence slightly yellowish, antennae brown; palpi yellow, infuscated at apices. Base of second tergite broadly yellow, venter largely yellowish. Apical two segments of fore and mid tarsi and all of hind pairs fuscous; hind femora except base, and apices and bases of hind tibiae blackened. Wings slightly infuscated apically.

Frons about twice as long as wide, with very short hairs; arista gradually tapered from base, densely pubescent, longer than antenna. Scutellum rounded, with two long hairs. First tergite as long as the next two combined, widened from base to apex; fifth sternite with a large patch in center pos-

teriorly nearly bare, laterad and basad of this with moderately long pale hairs; hypopygium with rather dense pale hairs. Hind femur as thick as first tergite; hind tibia with a beaklike apical process as in last species; hind trochanters with some minute black setulae below. Other cross-vein about twice as long as its distance from bend of fourth vein.

*Female*.—Differs from the male in lacking the yellow mark on second tergite, and in having two poorly defined rufous marks at base of third.

The first tergite is broader than in male, and not so long as the next two combined, the fourth is slightly flared at apex owing to the presence of a shallow transverse preapical depression, and is conspicuously hairy as is also the fifth sternite. The hind trochanters in allotype are as in type, but in the paratype there are no black setulae present. The hind tibiae lack the apical beaklike process in both specimens.

Length, 8–9 mm.

*Type*.—Bairs Ranch, Redwood Creek, Humboldt Co., Calif., June 11, 1908 (H. S. Barber). Allotype, female, Walnut Creek, Contra Costa Co., Calif., May 13. Paratypes, one female, Los Angeles Co., Calif. (coll. Coquillett), one male, Dewatto, Wash., June 7, 1906 (J. M. Aldrich), one male, Moscow Mt., Ida., June 4, 1910 (J. M. Aldrich), one male, Waha, Ida., June 18, 1909 (J. M. Aldrich).

#### ***Sphegina armatipes*, var. *rufa*, var. n.**

*Male*.—Rufous, frons fuscous, abdomen suffused with castaneous, bases and apices of hind tibiae and all of hind tarsi fuscous.

Structurally similar to the type form, differing as follows: Arista more slender and less densely pubescent, hind femora not so thick, the process at apex of hind tibia rounded at tip and compressed from each side, and the hind trochanters without black setulae.

Length, 8 mm.

*Type*.—Fieldbrook, Humboldt Co., Calif., May 29, 1903 (H. S. Barber).

#### ***Sphegina monticola*, sp. n.**

*Female*.—Fulvous, shining. Frons and upper half of face fuscous. Apices of tergites 1 to 3 dark brown. Apical half of hind femur black, basal segment of hind tarsus and apical two segments of all tarsi brown.

Frons about one fourth of the head width, very short haired. The curved linear thoracic depression complete. First tergite slender basally, not as long as next two together, third flared at apex, fourth with a deep notch in center of posterior margin. Hind legs as in *campanulata* Robertson.

Length, 7 mm.

*Type*.—Mt. Washington, N. H.

#### ***Sphegina occidentalis*, sp. n.**

*Male and Female*.—Head black, antennae brown, face yellowish in middle below. Thorax black, humeri and postalar callosity reddish. Abdomen in male black, with the base of second tergite broadly yellow, in female rufous. Legs yellow, hind femora black except bases, basal segment of hind tarsi brown, the apical two segments of all tarsi hardly darkened.

Frons of male about three times as long as wide, in female about twice as long as wide, very short haired; arista pubescent, thickened on basal fourth. Scutellum short and wide, over twice as wide at middle as its median length, apex subtransverse, the two long hairs very widely separated. Abdomen constricted near base of first tergite, the latter not as long as the next two combined, fourth (fifth) tergite in female deeply notched in center of hind margin; fifth sternite of male with the left hind angle produced into a rounded lobe which is gray pruinose apically, the hairs setulose. Hind femora stout, hind tibia not produced at apex ventrally, basal segment of hind tarsus slightly thicker than apex of tibia. Outer cross-vein as long as its distance from bend of fourth vein.

Length, 5.5–6.5 mm.

*Type and allotype*.—Dewatto, Wash., June 7, 1906. Paratypes, one male, Longmire Springs, Mt. Rainier, Wash., August 2, 1905, one female, Washington State. The first three taken by Dr. J. M. Aldrich, and the last one from the Williston collection identified and recorded by Williston as *rufiventris* Loew. I have not seen the latter from the west.

#### ***Sphegina biannulata*, sp. n.**

*Female*.—A black and yellow species closely resembling *flavimana*, the humeri, sides of mesonotum and scutellum, bases of second and third tergites and all of fourth, and all of fore and mid tarsi yellow; hind femur with two black bands, one just beyond middle and the other at apex.

The curved linear thoracic depression is practically absent, and in general this species is similar to *rufiventris*.

Length, 5.5 mm.

*Type*.—Virginia near Plumm's Island, June 2, 1916, on flowers of *Aruncus aruncus* (W. L. McAtee).

#### ***Sphegina flavimana*, sp. n.**

*Male*.—Similar to *keeniana* Williston in color, but the humeral angles of thorax are pale yellow, and the fore and mid tarsi are pale yellow, with the apical two segments rarely brownish.

Structurally similar to that species, the hind tibia slightly scoop-like at apex ventrally, and the abdomen the same in general form, but the fifth sternite lacks the short stubby spinules that cover a large part of the disc in that species.

*Female*.—Agrees in color with the male.

Length, 5.5 mm.

*Type*.—Male, Maryland near Plumm's Island, May 28, 1916 (H. L. Viereck). Allotype, Lafayette, Ind., July 30 (J. M. Aldrich). Paratypes, 3 males, Maryland near Plumm's Island, May 28–29, 1916 (H. L. Viereck), two males, Lafayette, Ind., May 11, 1918, and June 29, 1916 (J. M. Aldrich); 1 female, Glen House, N. H., named *lobata* Loew by Williston; one female, Ithaca, N. Y., June (R. C. Shannon), and 1 male Tallulah Falls, Ga., June, 1909 (J. C. Bradley).

***Sphegina californica*, sp. n.**

*Male*.—Similar in color to *infuscata* and *rufiventris*, the thorax black and the abdomen rufous, suffused with fuscous. Legs yellow, hind femora rufous, apical two segments of all tarsi and basal segment of hind pair fuscous.

Similar to *rufiventris* in structure, the arista long and slender, with the pubescence indistinct. Fifth sternite without spinules, the fine hairs very short. Hind legs as in *rufiventris*.

Length, 8.5 mm.

*Type and paratype*.—Walnut Creek, Calif., March 14 (W. M. Davidson).